

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Fasteners shall be high strength bolts. Flange splice holes shall be $\frac{15}{16}$ " ϕ for $\frac{7}{8}$ " ϕ bolts. Web splice holes shall be $\frac{13}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts.

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing" and "Temporary Slab Support System."

After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection".

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Grinding shall be done parallel to the longitudinal axis of the member. Ground surfaces shall be inspected for cracks using dye penetrant or magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately $\frac{1}{4}$ " deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat shall be Interstate Green, Munsell No. 7.5G 1/2. See Special Provision "Cleaning and Painting New Metal Structures".

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

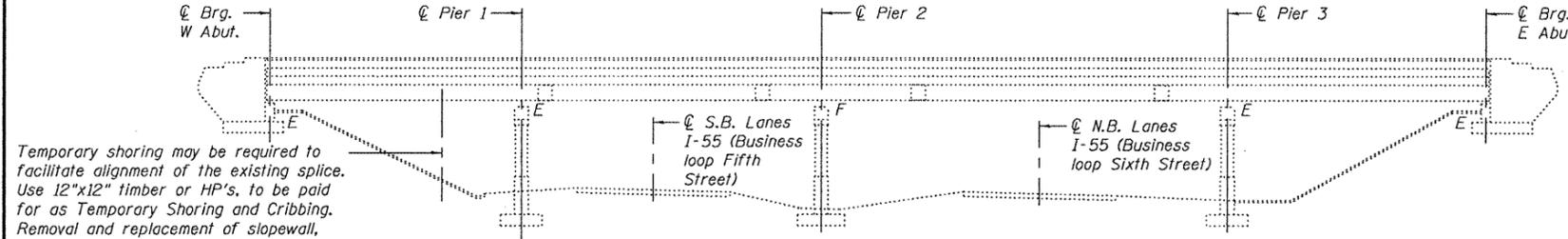
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

Diaphragm connection holes shall be $\frac{15}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts. Two hardened washers shall be required at diaphragm connections.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

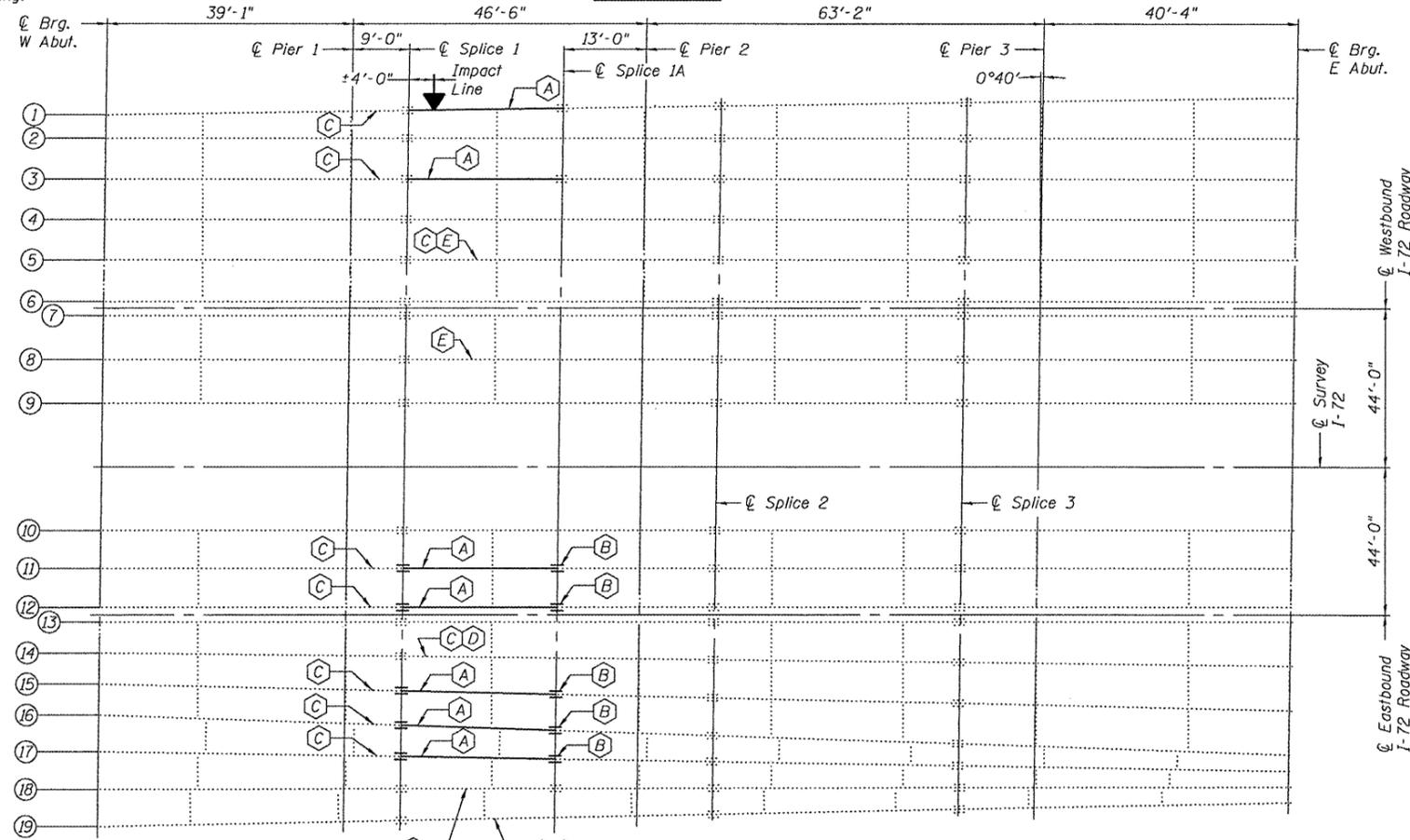
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

The Contractor should be aware of the presence of stay-in-place steel forms under the deck between beams. The Contractor must take appropriate measures to deal with the presence of these forms while removing beam section to be replace.



Temporary shoring may be required to facilitate alignment of the existing splice. Use 12"x12" timber or HP's, to be paid for as Temporary Shoring and Cribbing. Removal and replacement of slopewall, if required, is included with Temporary Shoring and Cribbing.

ELEVATION



SN 084-0076

SN 084-0077

PLAN

- (A) Remove and Replace Existing Beam Segment
- (B) New Splice Location
- (C) Beam Straightening
- (D) Beam Strengthening
- (E) Grind Nicks and Gouges

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	3.5
Concrete Superstructure	Cu. Yd.	3.5
Structural Steel Removal	Pound	25,630
Furnishing and Erecting Structural Steel	Pound	27,350
Temporary Slab Support System	L.S.	1
Beam Straightening	L.S.	1
Temporary Shoring and Cribbing	L.S.	1

PLAN AND ELEVATION
SN 084-0076 & 0077

DESIGNED *August Borynt*
CHECKED *Adrian J. Holloway*
DRAWN *Drew Christopher*
CHECKED *AJB ATH*

EXAMINED *Carl R. ...*
PASSED *Ralph E. Anderson*

SEPTMBER 16, 2009



Expires: November 30, 2010

SHEET NO. 1 7 SHEETS	F.A. RTE. 72	SECTION (84-3HB-4)I-1	COUNTY Sangamon	TOTAL SHEETS 17	SHEET NO. 11
	CONTRACT NO. 72C69			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	